

1 Positive prices for usage may lead customers to make fewer or shorter calls in off-
2 peak periods when Verizon incurs little, if any, traffic-sensitive costs to provide
3 switching to the customer's retail service provider.

4 The Commission has recognized this problem in the context of intercarrier
5 compensation. In its recent Notice of Proposed Rulemaking, the Commission
6 described the problem as follows:

7 Because these traffic-sensitive termination charges represent real
8 marginal costs to the carrier that pays them, they impose pressure
9 on the calling party's carrier to flow these costs through to end-
10 user customers and to adopt traffic-sensitive retail prices. If the
11 underlying network costs are non-traffic sensitive, however, then
12 these traffic-sensitive retail rates will reduce network usage to
13 inefficient levels.⁹

14 Similarly, positive prices for usage when Verizon incurs little or no
15 incremental cost to supply those rate elements can lead to substantial
16 overrecovery of forward-looking economic costs. Uneconomic usage-sensitive
17 pricing creates windfalls for Verizon.

18 Such pricing also gives Verizon an unfair advantage in offering services
19 that include switched minutes-of-use by inflating its competitors' off-peak
20 switching costs relative to those of Verizon. Anyone familiar with cellular and
21 PCS pricing plans can easily imagine Verizon offering a local exchange service

⁹ Notice of Proposed Rulemaking in CC Docket No. 01-92, *In the Matter of Developing a Unified Intercarrier Compensation Regime*, released April 27, 2001, at ¶ 17.

1 with a flat rate just sufficient to recover loop and retail-related costs, a per-minute
2 charge only for peak-period minutes and unlimited off-peak calling without any
3 additional charge. A competitor that must pay Verizon a positive price for every
4 off-peak minute would have difficulty matching Verizon's price, even though the
5 underlying cost to Verizon of supplying off-peak switching to the competitor
6 would be equal to the cost that Verizon incurs to offer the same off-peak
7 switching directly to the end-user.

8 **Q. HOW COULD THE COMMISSION AVOID THESE PROBLEMS?**

9 A. To avoid these problems, the Commission can use the alternative output that Mr.
10 Pitkin reports to establish a flat-rated switching charge. This rate design would
11 recover all of Verizon's costs for unbundled switching through a single per-port
12 charge. A flat-rated switching charge would allow Verizon to recover (but not
13 over-recover) all of its switching costs without putting pressure on competitive
14 carriers to assess uneconomic off-peak usage charges on their retail customers.
15 Thus, a flat-rated switching charge would promote full utilization of Verizon's
16 network.

17 **Q. ARE YOU SAYING THAT A FLAT-RATED SWITCHING CHARGE**
18 **PERFECTLY MATCHES THE MANNER IN WHICH VERIZON INCURS**
19 **SWITCHING COSTS?**

20 A. No. A flat-rated switching charge would not perfectly match the manner in which
21 Verizon incurs switching costs. Verizon would still incur certain peak-driven
22 capacity costs. A flat-rated price structure does not convey any price signal

1 concerning these peak-driven costs; therefore, at least in theory, use of a totally
2 flat-rated price structure could lead to overutilization of Verizon's switch during
3 peak hours and to call blockage. Recovery of usage-related switching charges
4 through a usage-based rate element provides a partial signal to carriers of the costs
5 of on-peak usage, although the price is understated, if the cost of peak usage is
6 spread across all minutes of use.

7 The Commission must weigh the possibility of overutilization of
8 Verizon's switches during the peak period, given a flat-rated switching charge,
9 against the virtual certainty of underutilization of Verizon's switches during the
10 off-peak period, given an average minute-of-use-based switching price. In
11 weighing these alternatives, the Commission should keep in mind that Verizon
12 currently recovers local switching costs from *retail* residential customers through
13 flat-rated prices in Virginia (as do most local exchange companies with which I
14 am familiar) Therefore, the risk of overutilization resulting from a flat-rated local
15 switching charge is no greater than the risk that Verizon already undertakes for its
16 retail local exchange operations for residential customers. Competitors are most
17 likely to purchase unbundled switching as part of the UNE platform to serve
18 residential customers.¹⁰

¹⁰ In fact, competitors *cannot* buy unbundled switching in many areas on behalf of end-user customers with four or more lines, a restriction that focuses the use of unbundled switching on residential and certain small business customers. 47 U.S.C.

(continued)

1 WorldCom witness Mr. Goldfarb and AT&T witness Mr. Kirchberger
2 present each company's recommendation as to how the Commission can best
3 resolve this rate design issue in a manner that is consistent with the economic
4 principles and considerations that I have outlined above.

5 **V. THE COMMISSION SHOULD BE ESPECIALLY CAREFUL TO**
6 **PREVENT VERIZON FROM ERECTING BARRIERS TO ENTRY VIA**
7 **EXCESSIVE, NON-COST-BASED NONRECURRING CHARGES.**

8 **Q. DO THE NON-RECURRING PRICES AT ISSUE IN THIS DOCKET**
9 **HAVE ANY SPECIAL ECONOMIC SIGNIFICANCE?**

10 A. Yes, there are at least two respects in which non-recurring prices have particular
11 economic significance. First, non-recurring prices are significant because they
12 represent an up-front cost of doing business that new entrants will incur in
13 conjunction with each customer that they win from Verizon and that Verizon need
14 not incur to maintain its monopoly legacy customers. New entrants must
15 overcome this additional hurdle to entry into the local exchange markets for which
16 Verizon previously held an exclusive franchise. At a minimum, competitors that
17 seek to enter the market using unbundled network elements in conjunction with
18 their own facilities will be unable to avoid non-recurring charges. Non-recurring

§51.319(c)(1)(B); *Third Report and Order and Fourth Further Notice of Proposed Rulemaking* in CC Docket 96-98 ("UNE Remand Order"), released November 5, 1999, at Appendix B.

1 charges can add significantly to the total cost that a new entrant will incur to use
2 Verizon's unbundled network elements, making competitive entry using those
3 elements uneconomic — even if the element prices themselves reflect sound
4 economic principles.

5 Second, non-recurring charges for unbundled network elements are
6 important because they are, in effect, entrance fees. Typically, the new entrant
7 must pay non-recurring charges for unbundled network elements to Verizon
8 before it can obtain the unbundled network elements it needs to offer service to an
9 end user. These “entrance fees” increase the capital that a new entrant must invest
10 up-front before it receives even a penny of revenue from its retail customer and
11 therefore make entry more difficult. Thus, to create the conditions under which
12 local competition can flourish non-recurring charges for unbundled network
13 elements must not exceed the forward-looking, efficient level necessary to
14 compensate Verizon for the costs that the new entrant truly causes Verizon to
15 bear. Non-recurring charges for unbundled network elements are a sunk cost and
16 thus create a barrier to entry.

17 **Q. IN GENERAL, WHY DO SUNK COSTS CREATE BARRIERS TO**
18 **ENTRY?**

19 A. A sunk cost is a cost that, once incurred, a firm cannot recover if it ceases
20 business. In essence, sunk costs are costs incurred for which the firm does not
21 acquire some tangible asset that can be resold. Sunk costs create a barrier to entry

1 because they increase the new entrant's risk that it will not recover the cost from
2 sales in the market.

3 **Q. SPECIFICALLY, WHY DO NON-RECURRING CHARGES CREATE**
4 **BARRIERS TO ENTRY?**

5 A. Unlike recurring charges for unbundled network elements or recurring costs for a
6 new entrant's own facilities, non-recurring charges are a sunk cost. A new entrant
7 cannot obtain a refund or repayment for any or all of the non-recurring charges it
8 pays Verizon, even if the new entrant loses the retail customer on whose behalf it
9 incurred the non-recurring charge or goes out of business entirely.

10 In contrast, if a new entrant loses a retail customer that it had been serving
11 using an unbundled loop, or exits the local exchange business entirely, the new
12 entrant is no longer obligated to pay monthly recurring charges for the loop it no
13 longer needs. Similarly, if the new entrant loses a retail customer that it had been
14 serving using its own switch, it can use the freed-up switching capacity to serve a
15 different retail customer or lease that capacity to another carrier. If the new
16 entrant leaves the local exchange business entirely, it can sell its switch to another
17 local exchange provider. As these examples illustrate, non-recurring charges for
18 unbundled network elements and collocation create a greater risk of non-recovery
19 of a new entrant's costs than do either recurring charges for unbundled network
20 elements or recurring costs for a new entrant's own facilities.

21 The only way that a new entrant can be sure of recovering the full cost of
22 the non-recurring charges it incurs on behalf of a retail customer is to impose an

1 up-front non-recurring charge on the retail customer that equals or exceeds the
2 non-recurring charge the new entrant had to pay Verizon to order the unbundled
3 network element or elements needed to serve that customer. This is easier said
4 than done. There are no non-recurring costs or non-recurring charges when an
5 existing customer of an incumbent local exchange carrier chooses to stay with that
6 incumbent. To persuade consumers to switch local exchange carriers, new
7 entrants may have to forego or minimize up-front charges, similar to the process
8 that has occurred in the interLATA markets with the Primary Interexchange
9 Carrier ("PIC") change charges. New entrants will have to try to recover any non-
10 recurring charges they must pay at least in part in the monthly recurring prices
11 that they charge their retail customers. The higher the non-recurring charges, the
12 less likely that a new entrant can recover those costs through a markup on
13 recurring prices over the average "life" of a customer, particularly given the
14 frequency of customer churn that one might reasonably expect in a newly
15 competitive market. This reality adds to the barrier to entry that non-recurring
16 charges create.

17 **Q. HOW DO NON-RECURRING CHARGES ASSOCIATED WITH A**
18 **CUSTOMER'S CHANGE OF SERVICE PROVIDER AFFECT THE**
19 **RELATIVE COMPETITIVE POSITIONS OF INCUMBENTS AND NEW**
20 **ENTRANTS?**

21 **A.** Because incumbent local exchange carriers such as Verizon start the competitive
22 era with virtually a 100% market share for local service, the difference in the
23 effect of non-recurring charges on the competitive positions of incumbents and

1 new entrants is enormous. At least initially, almost all non-recurring charges
2 associated with customers switching service providers will fall on new entrants
3 because all of their customers are “new.” Thus, all of the increased risk
4 associated with the sunk costs that non-recurring charges represent falls on new
5 entrants. All other things being equal, the risk associated with non-recurring
6 charges will increase the expected return that investors will demand to provide
7 capital to new entrants. The higher the non-recurring charges, the greater the risk
8 and the greater the increased cost of capital to new entrants.

9 This difference in capital costs makes competitive entry very difficult.
10 Even if a new entrant is equally as efficient as Verizon in every other respect, a
11 higher cost of capital means that the minimum price that a new entrant must
12 charge retail customers to recover all of its costs will exceed the minimum fully
13 compensatory price that Verizon can charge. Because new entrants generally
14 must offer *lower* prices than Verizon to win customers, it is clear that non-
15 recurring charges create a difficult bind for new entrants.

16 Verizon has every incentive to make non-recurring charges an even larger
17 barrier to entry than they would otherwise be by exaggerating the level of non-
18 recurring cost associated with the preordering, ordering, and provisioning of
19 unbundled network elements.

1 **Q. HOW WOULD THE USE OF NON-RECURRING CHARGES TO ERECT**
2 **BARRIERS TO ENTRY AFFECT CONSUMERS?**

3 A. If Verizon is able to use non-recurring charges to create a substantial barrier to
4 entry, consumers will be the ultimate losers. Fewer firms will be able to enter the
5 local exchange market, if any enter at all. Those that do enter will have to charge
6 higher prices than they might otherwise have been able to charge. All of this
7 limits or prevents consumers from getting the benefits that were supposed to come
8 from opening up local exchange markets to competition by reducing the
9 downward pricing pressure that competition is expected to exert.

10 **VI. THE COMMISSION SHOULD APPLY A “REUSABILITY” TEST TO**
11 **DISTINGUISH BETWEEN RECURRING AND NON-RECURRING**
12 **COSTS.**

13 **Q. WHAT IS THE DISTINCTION BETWEEN THE FORWARD-LOOKING**
14 **LONG-RUN ECONOMIC COSTS THAT SHOULD BE RECOVERED IN**
15 **RECURRING PRICES AND THOSE THAT SHOULD BE RECOVERED**
16 **IN NRCS?**

17 A. The key distinguishing characteristic between the costs that should be recovered
18 in recurring charges and those that can be — but do not have to be — recovered in
19 NRCs is whether the cost, once incurred, is for facilities that can be reused to
20 provide service to a subsequent customer without change. If so, Verizon should
21 recover the cost through recurring charges, not NRCs.

22 Based on this test, no capital costs belong in the NRCs for unbundled
23 network elements. All capital items could be used to supply service to another
24 customer. This is true for plant dedicated to a given customer premises, such as

1 the drop and the Network Interface Device ("NID"), as well as plant that can be
2 used for many customers, such as general purpose computers and switches. This
3 test also excludes all of the labor used to install that plant, because once the plant
4 has been installed to serve one customer, another customer at the same customer
5 premises could reuse that plant at no additional cost for that plant.

6 This leaves the cost of performing the transaction as the costs that can be
7 recovered in NRCs for unbundled network elements. These are the costs of
8 actually performing the tasks of preordering, ordering, and provisioning.

9 **Q. DOES THE DEFINITION THAT "FACILITIES THAT CAN BE REUSED**
10 **TO PROVIDE SERVICE TO A SUBSEQUENT CUSTOMER WITHOUT**
11 **CHANGE" IMPLY THAT NOT ALL ONE-TIME ACTIVITIES, EVEN**
12 **THOSE ASSOCIATED WITH A PARTICULAR SERVICE ORDER, CAN**
13 **BE CONSIDERED NON-RECURRING COSTS?**

14 A. That is correct. Not all one-time activities, even those associated with a particular
15 service order, are properly considered non-recurring costs. Consider, for example,
16 the loop itself. Verizon might construct an entire new loop to provide service in
17 response to a service order request. That circumstance does not, however, change
18 the basic fact that the construction of the loop is properly treated as a recurring
19 cost. Proper identification of one-time costs is particularly important in a
20 competitive environment where more than one local exchange carrier (including
21 the incumbent) may use a particular facility at different points in that facility's
22 economic life. If the first telecommunications provider to use the facility bears all

1 the forward-looking costs of a one-time activity benefiting multiple users, then
2 obviously the first user will be forced to pay more than its fair share.

3 Another loop-related one-time activity considered recurring is the physical
4 cross connection at a feeder distribution interface (“FDI”) of a loop’s feeder and
5 distribution plant. The reason this activity is recurring is that the connection
6 remains in place when a service disconnects; Verizon can reuse that connection
7 for a subsequent customer when that customer establishes new service to the
8 disconnecting location. Hence, this one-time activity benefits all future users of a
9 particular telecommunications facility and the costs of the activity are properly
10 characterized as recurring.

11 **Q. ARE THERE ANY OTHER REASONS FOR EXCLUDING THE COST OF**
12 **BOTH CAPITAL ITEMS AND THE LABOR FOR INSTALLING THEM**
13 **FROM NRCS?**

14 A. Yes. If the Commission uses a methodology for developing recurring costs that is
15 consistent with the approach reflected in the Synthesis Model, the costs that I
16 have described in the previous two paragraphs are captured in the recurring cost
17 estimates for unbundled network elements. Thus, including them again in NRCS
18 would result in double recovery of the relevant costs. Given that the loop
19 recurring cost captures the entire investment and expense for installing the entire
20 loop, it is obvious double counting to recount as a non-recurring cost the cost of
21 that field-work when Verizon establishes individual loops.

1 In a fully competitive environment, market discipline would prevent a
2 supplier of telecommunications services from double-recovering its costs. During
3 the transition to effective local competition and in the absence of such market
4 discipline, it is essential that the Commission prohibit Verizon from incorporating
5 the same costs in both its recurring and non-recurring prices. Furthermore, as a
6 matter of economic principle, Verizon should reflect capital costs and field-work
7 costs in its *recurring* cost studies, rather than its *non-recurring* cost studies. I
8 understand that Verizon has in fact done so in the cost studies that it has
9 previously submitted.

10 **Q. WHAT WOULD BE THE EFFECT ON COMPETITION IF VERIZON**
11 **RECOVERED CAPITAL AND OTHER RELATED COSTS THROUGH**
12 **NRCS?**

13 A. If Verizon recovered capital and other related costs in NRCs, this would enlarge
14 the barrier to entry that NRCs inherently create. Verizon's proposed recovery of
15 costs that should be more appropriately recovered in recurring prices through
16 NRCs converts recurring costs that are not sunk costs for either the new entrant or
17 Verizon into sunk costs for the new entrant, thereby greatly increasing the size of
18 the barrier to entry. Transforming these costs into NRCs also would lessen the
19 likelihood that a new entrant could fully recover these costs from its end users.

1 **VII. THE NRCM PROVIDES AN APPROPRIATE, BUT CONSERVATIVELY**
2 **HIGH, ESTIMATE OF THE COSTS OF THE TRANSACTIONAL**
3 **FUNCTIONS OF PRE-ORDERING, ORDERING AND PROVISIONING.**

4 **Q. FOR WHAT FUNCTIONS DO INCUMBENT LOCAL EXCHANGE**
5 **CARRIERS TYPICALLY IMPOSE NRCS?**

6 A. Incumbent local exchange carriers have imposed NRCs on end users for what are
7 essentially transactional costs. These are primarily one-time costs that do not
8 include either labor costs for activities that recur regularly or capital costs.

9 **Q. WHAT TRANSACTIONAL FUNCTIONS WILL YOU DISCUSS IN YOUR**
10 **TESTIMONY?**

11 A. I will discuss three transactional functions: pre-ordering, ordering, and
12 provisioning in response to a request for service by an end user. Mr. Walsh
13 discusses and defines each of these activities in his testimony. I do not address
14 maintenance and repair because the costs for these functions are, in their entirety,
15 regularly recurring functions that are, therefore, included in recurring costs for
16 unbundled network elements and recovered in recurring charges for those
17 elements.

18 **Q. WHAT DOES IT MEAN TO SAY THAT NON-RECURRING COST**
19 **FUNCTIONS SHOULD BE PRICED USING FORWARD-LOOKING**
20 **LONG-RUN ECONOMIC COST?**

21 A. Prices for non-recurring functions that reflect forward-looking long-run economic
22 cost should be based on the cost that Verizon would incur for these functions if it:
23 (1) uses forward-looking OSS operated efficiently, (2) employs efficient work
24 practices, (3) deploys a network architecture that is forward-looking (*i.e.*, that

1 matches the network architecture assumed to developed recurring costs), and (4)
2 incurs reasonable labor costs. Mr. Walsh provides a detailed discussion of the
3 capabilities of forward-looking OSS as they relate to non-recurring costs.

4 **Q. WHAT DO YOU MEAN BY MAKING USE OF EFFICIENTLY**
5 **OPERATED FORWARD-LOOKING OSS?**

6 A. Forward-looking (and current) OSS are sufficiently sophisticated to allow Verizon
7 to process a very high percentage of valid orders and to provision the necessary
8 facilities automatically, without manual intervention. It is my understanding that
9 the NRCM conservatively assumes only that Verizon maintains and operates its
10 existing “legacy” systems to extract the level of efficiency that those systems are
11 designed to deliver. Forward-looking standards exist that are expected to deliver
12 even more sophisticated and efficient OSS performance than the legacy OSS
13 assumed in the AT&T/WorldCom Non-Recurring Cost Model.

14 Essentially, Verizon today has a choice between (1) having efficient
15 pre-ordering, ordering, and provisioning systems that operate a very high
16 percentage of the time without manual intervention once the service order
17 information has been entered into the system correctly, or (2) accepting a less
18 efficient process and allowing a higher percentage of orders that “fallout”¹¹ of the
19 mechanized process and must be handled manually. The second option would be

¹¹ Mr. Walsh discusses the concept of order “fallout” in more detail.

1 more costly, because it requires many more personnel to provision services.

2 Hence, a forward-looking economic cost analysis should reflect the costs

3 associated with option one.

4 **Q. HOW DOES FORWARD-LOOKING OSS AFFECT THE NON-**
5 **RECURRING COST OF ORDER PROCESSING?**

6 A. Provided that the data going in are accurate, the “flow-through” capabilities of
7 forward-looking OSS eliminate the labor component associated with order
8 processing (*i.e.*, costs associated with taking in and processing the data on a given
9 order as opposed to costs associated with doing any specific requested work
10 activity). The non-recurring, forward-looking long-run economic cost of the order
11 processing component of the three transactional functions is therefore zero
12 because the costs of the OSS themselves are included in recurring capital costs.
13 Any significant level of fallout that might remain and require manual correction is
14 attributable to an overall network management decision.

15 **Q. DOES THE NON-RECURRING COST MODEL ASSUME THAT THE**
16 **COST FOR ORDER PROCESSING IS ZERO?**

17 A. No. In deference to the long-standing practice of charging for these functions in
18 an up-front charge, the Non-Recurring Cost Model develops a non-recurring
19 service order processing cost that reflects the labor might be required to manually
20 correct what might be an efficient level of fallout for Verizon to maintain.

21 The fallout that Verizon handles manually should be minimal. As I noted
22 above, it is economically efficient for Verizon to manage its OSS so that orders

1 can flow-through. Furthermore, Verizon can and should return the vast majority
2 of input errors to the competitor originating the order via automated front-end
3 edits. Competitors will directly bear most of any cost to process orders and
4 correct fallout. Hence, the forward-looking cost that Verizon incurs for this
5 function on the wholesale side of its operations should be significantly smaller
6 than its retail operations costs.

7 **Q. IF VERIZON'S OSS PERFORMANCE DOES NOT CORRESPOND TO A**
8 **FORWARD-LOOKING OSS BECAUSE VERIZON'S EXISTING**
9 **DATABASES ARE CONTAMINATED WITH INCORRECT DATA,**
10 **SHOULD NEW ENTRANTS PAY FOR INCUMBENTS TO CLEAN UP**
11 **THOSE DATABASES?**

12 A. No. Cleaning up databases so that a high percentage of orders flow through is an
13 activity that incumbents must undertake to maintain or improve their own
14 competitive position. Moreover, this activity could bring very significant cost
15 savings to Verizon. The need to clean up legacy databases is an example of past
16 inefficiency. The Commission should not allow Verizon to impose the cost of
17 such inefficiency on new entrants; indeed, to do so would be anti-competitive.

18 **Q. WHY WOULD MAKING NEW ENTRANTS PAY TO CLEAN UP**
19 **VERIZON'S DATABASES BE ANTI-COMPETITIVE?**

20 A. Cleaning up its databases would help Verizon to attract and retain end users. In a
21 competitive environment, incumbents would face strong market pressures for
22 well-managed and maintained OSS because fallout increases the cost of providing
23 service and also reduces the quality of service provided to customers. A company

1 operating in a competitive environment has market incentives to improve
2 customer service and reduce costs. Maintaining efficient OSS allows Verizon to
3 achieve these objectives.

4 For example, in the express shipping business, efficient OSS are (or were,
5 until they became a standard business requirement) the competitive edge that
6 allows customers to access FedEx's tracking system to determine the status and
7 location of a package. This competitive benefit of efficient OSS pertains to retail
8 operations, whether or not the company also has wholesale operations. In other
9 words, where retail customers have a choice of service providers, competitors
10 such as Verizon have a strong incentive to maintain OSS and databases efficiently
11 because customers are very sensitive to service delays.

12 Making new entrants pay for this activity is asking new entrants to
13 subsidize the improvement of Verizon's ability to compete with them.

14 **Q. GIVEN THAT THE FORWARD-LOOKING COST OF ORDER**
15 **PROCESSING IS ZERO, WHAT IS THE COST DRIVER FOR NRCS**
16 **BASED ON FORWARD-LOOKING LONG-RUN ECONOMIC COSTS?**

17 A. The cost driver for NRCs based on forward-looking long-run economic costs is
18 the labor cost associated with manually performing any non-recurring task that is
19 requested on the order. A typical non-recurring cost study consists of determining
20 the tasks that are required to be performed manually, the amount of time it takes
21 to perform the task, the frequency with which the task must be performed, and the
22 cost per hour of the personnel who perform the task. If one assumes, as forward-

1 looking long-run economic cost principles require, that forward-looking OSS are
2 operating optimally, manual activities for preordering, ordering, and provisioning
3 should be very infrequent.

4 **Q. TRADITIONALLY, INCUMBENTS HAVE CHARGED END USERS FOR**
5 **BOTH CONNECTING AND DISCONNECTING SERVICE IN THE**
6 **INITIAL NRC. SHOULD NEW ENTRANTS PAY FOR**
7 **DISCONNECTING AT THE TIME THEY PAY FOR CONNECTION A**
8 **NEW UNE?**

9 A. No. New entrants should not pay for disconnecting service at the time that they
10 pay for connection of a new UNE. Requiring a new entrant to pay for
11 disconnection at the time it orders a connection violates cost causation, as Verizon
12 does not incur the costs of disconnection until or unless a facility is disconnected.
13 Moreover, because the length of the period between connection and disconnection
14 is uncertain, recovering disconnection costs through an up-front NRC raises
15 needless “time value of money” issues. Indeed, to the extent that end users
16 currently pay for both connections and disconnections at the time they order
17 service, this practice is questionable because the facilities are often not physically
18 disconnected when service is terminated. It is certainly the case that new entrants
19 should not pay for disconnection unless and until they order the facilities to be
20 disconnected. The NRCM appropriately reports separate connect and disconnect
21 costs that provide the detail necessary to establish separate cost-based connect and
22 disconnect charges.

VIII. THE NRCM APPROPRIATELY DOES NOT INCLUDE ANY COST FOR LOOP QUALIFICATION.

Q. WHAT IS LOOP QUALIFICATION?

A. Loop qualification is the process of identifying the characteristics of a given loop (such as loop length and the presence and location of potential DSL-inhibiting network components such as load coils, excessive bridged taps and repeaters) and determining the suitability of that loop for provisioning DSL-based services. The characteristics of a given loop determine whether the loop is usable at all for providing any type of DSL-based service, the modifications (if any) needed to “condition” the loop to provide DSL-based service and the type/speed of DSL-based service that may be offered over that loop, with or without “conditioning.” These determinations are specific to the DSL technology and equipment that a particular carrier deploys; thus, a new entrant may be able to offer its DSL-based services over a loop that would not meet Verizon’s technical specifications for DSL-based services and *vice versa*.

The carrier-specific nature of loop qualification has significant implications for the definition of the loop qualification activity for which competitors will pay Verizon. Verizon can only meaningfully perform the first step of the loop qualification activity—providing access to the relevant information on loop characteristics. The new entrant’s own personnel must then use this loop characteristic information to determine the suitability of a given loop for provisioning that carrier’s variants of DSL-based services.

1 **Q. HAS THE COMMISSION AGREED THAT INCUMBENTS SHOULD**
2 **PROVIDE DIRECT ACCESS TO THE DATA THAT COMPETITORS**
3 **NEED TO DO THEIR OWN LOOP QUALIFICATION?**

4 A. Yes. In its *UNE Remand Order*, the Commission states that incumbents must
5 provide requesting carriers access to all available information relating to loop
6 qualification for DSL-based services. The pertinent information includes, but is
7 not limited to: “fiber optics or copper; the existence, location and type of any
8 electronic or other equipment on the loop, including but not limited to, digital
9 loop carrier or other remote concentration devices, feeder/distribution interfaces,
10 bridge taps, load coils, pair-gain devices, disturbers in the same or adjacent binder
11 groups; the loop length, including the length and location of each type of
12 transmission media; the wire gauge(s) of the loop; and the electrical parameters of
13 the loop, which may determine the suitability of the loop for various
14 technologies.”¹²

15 The clear purpose of this requirement is to compel incumbents to produce
16 the information that will allow competitors to make their own determinations
17 about the suitability of loops for the technologies that the competitors intend to
18 deploy. This purpose is implicit in the finding that “under our existing rules, the
19 relevant inquiry is not whether the retail arm of the incumbent has access to the
20 underlying loop qualification information, but rather whether such information

¹² 47 C.F.R. § 51.5; *UNE Remand Order* at ¶¶ 427-8.

1 exists anywhere within the incumbent's back office and can be accessed by any of
2 the incumbent LEC's personnel."¹³ If the Commission intended for Verizon or
3 other incumbents to make the determination on behalf of new entrants, there
4 would be no reason to require the incumbents to provide competitors with the
5 information that "back office" personnel such as Verizon engineers use to perform
6 a loop qualification analysis.

7 **Q. HOW CAN THE COMMISSION SET A TELRIC-BASED PRICE FOR**
8 **ACCESS TO LOOP MAKEUP INFORMATION?**

9 A. The Commission can set a TELRIC-based price for access to loop makeup
10 information by recognizing the efficient, long-run means for providing such
11 information. In the long run, Verizon should make loop makeup information
12 available directly to new entrants in an electronic format. In such a fully
13 mechanized environment, the forward-looking cost of providing loop makeup
14 information electronically should equal to the cost for supplying a few additional
15 fields of data via Verizon's OSS, *e.g.*, the additional processor capacity time
16 required for a few additional bits of data and the power required to process those
17 bits. Given the current power and price for processors, it is unlikely that the cost
18 for the additional capacity required to process loop characteristic data would even
19 be measurable on a per-order basis. Therefore, the best estimate of the efficient,

¹³ *UNE Remand Order* at ¶ 430.

1 long-run cost for the electronic provision of loop makeup information, which new
2 entrants can in turn use to perform their own loop qualification assessment, is \$0.

3 **Q. HAVE STATE REGULATORS FOUND THAT A \$0 OR NEAR \$0 PRICE**
4 **IS THE APPROPRIATE TELRIC-BASED RESULT FOR ACCESS TO**
5 **LOOP MAKEUP INFORMATION?**

6 A. Yes. State commissions have found that a \$0 or near \$0 price is the appropriate
7 TELRIC-based result for access to loop makeup information. The Texas Public
8 Utility Commission found that “SWBT should be fairly compensated for the real
9 time access to its OSS functionalities required” and established an interim
10 nonrecurring “dip charge” of \$0.10 per loop for loop makeup information.¹⁴
11 Although it is an interim finding, the California Public Utilities Commission has
12 also found that Pacific Bell’s forward-looking economic cost to provide loop
13 qualification should be insignificant (at or near \$0).¹⁵

¹⁴ Public Utility Commission of Texas, Arbitration Award, Docket No. 20226 and 20272, November 30, 1999, at 102-103.

¹⁵ California Public Utilities Commission, R.93-04-003/I.93-04-002, Interim Arbitration, Line Sharing Phase, Final Arbitrator’s Report, May 26, 2000, Issue 31 at p. 91-2, as affirmed by the full Commission in D.00-09-074, Ordering Paragraph 1.

1 **IX. THE NRCM APPROPRIATELY DOES NOT INCLUDE ANY COST FOR**
2 **LOOP “CONDITIONING.”**

3 **Q. WHAT IS LOOP “CONDITIONING”?**

4 A. In the context of this arbitration, loop “conditioning” refers to modifications to
5 embedded loop plant facilities to remove equipment or plant arrangements that
6 would impede the transmission of DSL-based services.

7 **Q. WHAT IS THE RELEVANT REGULATORY CONTEXT THAT THE**
8 **COMMISSION SHOULD CONSIDER IN DEVELOPING POLICY**
9 **RELATED TO LOOP “CONDITIONING”?**

10 A. Unbundled network elements such as DSL-capable loops are *not* offered in a
11 competitive market. Instead, companies such as Verizon make these elements
12 available to their competitors pursuant to regulatory and legal requirements
13 intended to limit the effect of incumbency advantages on the outcome of local
14 competition. New entrants cannot offer ubiquitous, or even widespread, service
15 without using unbundled network elements. This reality gives incumbents such as
16 Verizon tremendous potential leverage.

17 Verizon has no incentive to facilitate competitive entry by making the use
18 of unbundled network elements easy or inexpensive. Quite the opposite. Absent
19 the constraints that regulators place on it, Verizon might very well refuse to
20 provide elements that enable competitors to offer advanced services (or other
21 services) at all.

1 For example, no Verizon-affiliated incumbent voluntarily offered to make
2 available the elements required for competitors to develop line-sharing
3 arrangements prior to the Commission's mandate to do so. Through such tactics,
4 incumbents successfully obtained a significant head start in deploying this
5 efficient means of delivering DSL services, even though they may not have been
6 the first competitors that would otherwise have been ready to deliver a line-shared
7 DSL option to end users.

8 Similarly, through its advocacy of substantial nonrecurring charges for
9 DSL "conditioning," Verizon has successfully leveraged control of the loop to
10 constrain competitors from offering DSL services to customers that Verizon itself
11 is not ready to serve. In this fashion, Verizon can maintain control of where and
12 when DSL is available in a manner that coordinates with its own business plan —
13 to the ultimate harm of competition and consumers in Virginia (and elsewhere).

14 **Q. DOES THE NON-RECURRING COST MODEL INCLUDE COSTS FOR**
15 **LOOP "CONDITIONING"?**

16 **A.** No. The NRCM appropriately does not include non-recurring costs for loop
17 "conditioning" because prices based on costs that comply with forward looking
18 economic cost principles would not reflect an additional non-recurring cost for
19 DSL-related "conditioning."

1 **Q. WHAT ASPECTS OF A FORWARD LOOKING ECONOMIC**
2 **METHODOLOGY ARE MOST RELEVANT TO THE ISSUE OF LOOP**
3 **“CONDITIONING”?**

4 A. Two aspects of a forward-looking economic cost methodology are especially
5 relevant to loop “conditioning.” First, a forward-looking cost methodology, such
6 as the TELRIC methodology, is almost totally divorced from the existing network
7 configuration that Verizon (or any other carrier) deploys. Second, a forward-
8 looking economic cost analysis of UNEs requires the minimization of *total*
9 forward-looking costs, both recurring and non-recurring, which implies that the
10 network configuration used to calculate both types of costs must be consistent.

11 **Q. WHAT IS THE SIGNIFICANCE OF THE FIRST ASPECT OF THE**
12 **METHODOLOGY THAT YOU IDENTIFIED IN YOUR PREVIOUS**
13 **ANSWER?**

14 A. A forward-looking economic cost analysis should capture the cost that the firm
15 would incur to provide service to a given market in the future, without
16 considering constraints imposed by the firm’s past decisions. Thus, forward-
17 looking economic cost is the cost that an efficient new entrant in that market
18 would experience if the new entrant served the total quantity demanded.

19 The TELRIC methodology is not a pure forward-looking economic cost
20 analysis in that the Commission ruled that cost studies for unbundled network
21 elements should be “based on the use of the most efficient telecommunications